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## CLINICAL LECTURE.

### ACUTE SUPPURATION OF THE MIDDLE EAR IN INFANCY.

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POLYCLINIC.

*Gentlemen:* This infant with a mucopurulent discharge from the ear which I now bring before you, suggests many points of importance for our consideration. The coryza, with which its trouble began, is now largely past, but enough of it remains to indicate the truth of the history which is given and to point to the need of nasal treatment. The skin about the ear, as well as on the walls of the meatus, is somewhat excoriated by the discharge; and gives its indication for the most scrupulous cleansing and the use of an emollient and protecting ointment. The tenacious character of the discharge tells us that our best efforts will probably fall short of complete evacuation of the drum cavity from which it comes—for I need hardly remind you that only from the middle ear could this mucus be derived, since there is no mucous membrane in the external canal—and the large admixture of mucus indicates that the alteration of the tympanic lining is not extreme. From this it follows that the collection within the drum-cavity has probably exerted little destructive action upon the drum-head, has forced its way through it only after great distention, and that the perforation is only a separation of the fibers, not a clear, clean hole. A tiny pouting point through which drops of sticky discharge slowly exude is what we are to expect to see when we have drained the canal; and even in this expect-

tation we may be disappointed, for the opening may be so inconspicuous that we shall fail to discern it through the narrow swollen canal, into which strong illumination with mirror and speculum seems to penetrate but poorly.

Inspection confirms the anticipation. The perforation is recognizable only by the bead of discharge which protrudes from it and stretches into a long string as I try to wipe it away; and now, hanging from it, serves to locate the invisible opening. Spraying the nares clear with Dobell's solution, and making an application of weak glycerole of tannin with the bent applicator above the soft palate—as much to sweep away any collections there as to obtain any astringent effect—we can inflate the tympanum with the Politzer bag, unimpeded by secretion in the naso-pharynx. As a result we find a new quantity of glairy discharge mixed with air bubbles in the auditory canal, and in removing it can draw away another string protruding from the perforation; after which repeated inflation forces the air through with a fine crackling rale. Light dusting of the bottom of the meatus with boric powder furnishes a slightly astringent and disinfecting dressing; and we will direct the mother to return to-morrow, syringing the ear meantime if any discharge appears. To the excoriated skin we apply an ointment of calomel in vaseline, and could do the same to the nasal mucous membrane; but will employ the gentler procedure of spraying with a protective film of fluid cosmoline, and lightly insufflating the calomel.

At the next visit we may expect to find further decrease of the coryza, a less inflamed auditory canal and perhaps a slight diminution of the discharge. On this last we can hardly yet count. The affection has probably quite a course yet to run; and unless we enlarge the opening in the drum-membrane greatly, so as to gain free access

Admitted at the Philadelphia Polyclinic.

to the inflamed surfaces or adopt other rather heroic methods of treatment, we cannot expect to cut short the attack. With careful watching these simpler measures will doubtless suffice to guide the case to an early and safe termination; so we will hold the more energetic measures in reserve unless more urgent symptoms arise. The nutrition must be looked to, for upon it the satisfactory resolution largely depends; but any medication that might impair digestion is hazardous. In some of these cases inunction with cod-liver oil has distinct value, as combining food, tonic and protection against renewed cold-taking.

Turning a moment from the pathological aspect of this case, I will ask you to study with me some important anatomical points which it brings before us—and this the more especially because the text-books would generally lead you astray. You know that in the new-born infant the annulus or tympanic bone, in the groove of which, as in a frame, the drum-membrane is set, is a separate and distinct bone, forming part of the lower outer surface of the skull. The drum-head, therefore, like the fontanelle, is a portion of the surface of the head, as this specimen shows. But do not imagine, as too many do, that it is to be found immediately within the mouth of the auditory canal. When I pass the cotton-tipped probe down into contact with it, you see that it is about an inch and a quarter in—as deep as in the adult. The external auditory meatus is nearly as long, then, in the infant as in the adult; and, being usually narrower, it is more difficult to illuminate its depths and study the conditions at its bottom. A part of this difficulty is owing to the fact that in the absence of a bony canal there is a much greater tendency of the walls to fall into contact—a tendency which is present only in the outer, cartilaginous portion of the adult canal. To see into the auditory canal, you are instructed to draw the auricle up, back and outward—this serving to straighten out the curves which it naturally assumes in adult life. But you will find this will not do in the infant: the canal is only rendered narrower and more curved by such traction. The drum-head is, at this period, well under the base of the skull, and the meatus extends upwards along the curve of the squama as it passes out. We must draw the auricle *down*, then, in the young child, in order to straighten and dilate the tube through which we are to see; and many

fail in their study from not doing so. The auricle must be well drawn down in order to bring the external orifice to the level of the drum-membrane; while in the adult you will find that the axis of the canal almost always tends upwards—that the tympanic end is the higher.

Here we have an explanation of the statement made in almost all of the text-books that the inclination of the drum-head is greater in the infant—that it is more horizontal. Politzer alone, so far as I recall, states the contrary, basing his view on the careful anatomical studies of the point made by Pollak and himself, although Roosa doubtfully accepts this. As you look again at this infant skull with its drum-membranes close together under the base, so that their extreme inclination is conspicuous, it is hard to believe that this does not represent a condition wholly unlike what we daily see in the full-grown state. As seen clinically, the drum-head seems nearly at right angles to the axis of the canal through which we view it, and we must constantly disabuse our minds of this impression. It is hard to believe the demonstration afforded by casts of the auditory canal, by sections of the entire organ or by good anatomical preparations—all agreeing in showing great obliquity of the adult membrane. But it is only by means of a preparation such as this, where the bony lower walls of the canals have been removed on both sides, so that you can see the tympanic membranes just as you do in the infant skull, that their relations to each other can be appreciated and their inclination actually measured. Then it is manifest that, as accurately as we can measure, there is no difference in the inclination. The adult membrane is exactly as near horizontal as the infant's. Great development has taken place in the sphenoid bone, with the general skull growth, pushing the tympanum farther apart; the squamous and mastoid portions of the temporals are far larger, and even the petrous portions have apparently grown greatly. How, then, you may well ask, has it been possible that this relation has remained unchanged? Are these two specimens not merely accidentally similar exceptions, not typical examples.

The true relation is what is here shown. I can show you other preparations just like them; while I have never seen any to the contrary. Extraordinary as it may seem, there are some parts of the body which are

of full size at birth. Such are the labyrinth and the ossicles of the ear, and the drum-membrane can probably be included in the same list. A slight growth is perhaps usual in each of these structures; but it is so minute as to be doubtful; and it is even claimed that the ossicles are larger at birth than in later life. The tympanic membrane and the annulus in which it is framed undergo no noteworthy growth in extra-uterine life—marked as is the growth of adjacent structures; so there is no reason to expect that the inclination of the two membranes to each other or to the basal plane of the skull must undergo modification. The assumption of change is gratuitous, and falls at once to the ground when tested anatomically.

If, therefore, your examination of an infant's drum-head is unsatisfactory, the principal anatomical reason is probably to be found in the relative, and perhaps the actual, narrowness of the long canal, which is specially liable to inflammatory swelling. The tympanic membrane may appear small because you cannot see the whole of it—it may seem exceedingly oblique because you are looking at it from above rather than below the horizontal line (yet it must also be remembered that an opaque membrane, especially if much congested so as to be ill-defined, always shows its obliquity markedly)—its posterior portion, if there is secretion within, is apt to be so bulging as to hide the malleus-handle and short process—and any perforation is usually small and recognizable only by the drop of fluid occupying it and giving back a pulsating reflection, or by a protruding bead of more tenacious discharge, as in our present case. Yet the negative side of such a study is so important that it should never be omitted. Polyp formation is quite common in such cases, and is of the gravest importance in causing obstruction of the outflow, with all the consequent dangers to the mastoid and to the brain. Such growths must be promptly removed. The drum-membrane may be somewhat thickened, and the pressure within the tympanum may rise to a dangerous height from retained secretion without doing more than distend and not rupture it. Paracentesis may then be exceedingly important. Cases may present all the symptoms of meningitis, with convulsions, paralysis and high fever, and yet yield promptly when a protrusion on the upper-back wall of the canal, indicating collection in the mastoid antrum, has been dis-

covered and incised. It is far better to foresee such conditions and combat them early, if possible; and a great aid to that end will be furnished by the inspection of which we have been considering the drawbacks and their avoidance. And when our inspection shows none of these conditions of grave omen, we have fair assurance that the case is one which can be safely guided by simple measures to a full and timely recovery.

In such cases, then, as the one before us, cleansing and protection are our needful measures. Cleansing sounds rather simpler and easier than it is in fact. The discharge is often of the tenacious character shown in this case, and both syringing and mopping with cotton are needed to clear the external canal. Even with the inflation of the tympanum, that cavity can be but partially freed of retained secretion; and the blowing in of air from the nose calls for cleansing of its cavities as a pre-requisite to an unobstructed and unpolluted entrance of air through the Eustachian tubes. The infantile tubes are short and wide, the nasopharynx small; so there is rarely any difficulty in forcing the air into the drum-cavities. The Politzer bag with the olive-shaped tip forms the best inflation apparatus; and the child in crying will furnish all the aid required, such as the adult affords by raising the soft palate in swallowing. After this air-douche, any discharge is to be wiped away from the bottom of the external canal once more—a little mopping with peroxide of hydrogen may do this most thoroughly and perhaps penetrate the perforation, however small; then impalpable boric powder is to be blown in with the aid of a regular insufflator, or of one improvised from a quill. This dusting should be but sparing if the discharge is markedly mucous, for this will but slightly dissolve the powder; and the rule not to use insoluble powders may here include boric acid. Usually the boric powder may be freely used, even to the extent of packing the canal as full as this blowing in will do it; and while some claim that this method does not carry the powder to the bottom of the canal, the slightest observation will demonstrate to you that it does. This gives us an unirritating, aseptic, absorbent dressing, mildly astringent as it dissolves; and while little or none of it may penetrate into the tympanum, it still exerts no little influence on the inflammation. It should be renewed, after cleansing, as often as discharge appears externally. The infla-



tions are to be continued after all discharge has ceased, to further the restoration of the ear to its normal condition and function; and the nasal treatment is also to be maintained in order to forestall, if possible, a new involvement from this source.

## COMMUNICATIONS.

### PURPURA HEMORRHAGICA AND METRORRHAGIA.<sup>1</sup>

BY M. ANDERSON, M. D.,  
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The case which I report is that of a young woman, 24 years of age, who is a "bleeder" in the fullest sense of the word. She bleeds freely from the nose, the stomach, the bowels, and from the uterus. She is both menorrhagic and metrorrhagic. Her skin is of waxy whiteness and presents ecchymosis on slightest pressure. I was first called to see her six years ago, when she was suffering with extreme, profuse uterine hemorrhage, and what first attracted my attention on entering her room, was the purpuric condition of her skin, the arms and legs being covered with ecchymosis.

From her mother I obtained the following history. The patient was then eighteen years old, and had been subject to nose bleeding from childhood. This frequently followed a fit of anger or some trifling disappointment. She commenced menstruate at twelve years of age. Menstruation was very profuse, and about a week or ten days before each menstrual period, black spots, from the size of a pea to that of a silver dollar, would appear in her arms and legs, and if she cut, or even pricked her fingers with a needle, there would be considerable bleeding from the wound. Her appetite was variable, and her bowels generally regular, but sometimes the evacuations were black and of the consistency of tar. Her general health was good, except a languid feeling a few days before the appearance of the black spots, and weakness for a short time after loss of blood, and she slept soundly about twelve hours out of the twenty-four. The mother had never suffered any abnormal hemorrhage; nor had any other member of the family suffered so,

except an aunt on the father's side, who had profuse menstruation, and had been subject to nose-bleed.

The usual time for the menstrual flow with this girl was six days, but when I first saw her she had been bleeding for five days after the menses should have ceased. I immediately gave her fluid extract of ergot, and also a uterine injection of alum water. I regarded the case as extremely serious, and saw her again in a few hours, in which time she had suffered a slight shock of paralysis.

I requested counsel, but her parents objected, at the same time saying they believed I could do all that any one could. I thanked them for their expression of confidence in me, but told them their daughter was in a very dangerous condition, and they might be better satisfied in the end by having had counsel. I at once set aside the ergot; for, although it had not produced the slightest action on the uterine vessels, I feared its action on the vessels of the brain, as it was evident the paralysis was due to impoverishment of the nerve centres, because, by laying her head lower than her body, so that what little blood she had left could gravitate to the brain, the paralysis was overcome for the time. I then gave her gallic acid, also elixir of iron, quinine and strychnine, and all the milk she could drink. In the meantime Dr. Fox, of Madison, was called, and he pronounced the case almost hopeless, saying I might as well try to hold water in a sieve, as to try to save her. He, however, suggested that I give her a little more iron, which I did, giving her ten drops of the tincture of the chloride in lemonade, but the stomach rejected it. I gave it again two or three times, but with the same result. I then discontinued the iron, feeling that I must guard the stomach; for if the habit of vomiting should become established with her, I should have very little to depend on. I continued the alum-water injections, and was highly gratified at having the hemorrhage cease under their use. I thought I had found the remedy in her case.

The cessation of the uterine hemorrhage was quickly followed by epistaxis. This was controlled by pressure, and for a few days I had hope of her recovery, when from some cause, probably disappointment in not getting what she had her mind set upon, the uterine hemorrhage returned, and persistent vomiting set in. The stomach would not tolerate a particle of anything, not even a drop of water. The retching was almost

<sup>1</sup> Read before the Central Wisconsin Medical Society.



continuous, so that rectal feeding and medication were necessary. I again resorted to my alum-water injection, only to be disappointed in it, although I repeated the operation several times. I then tried plugging the uterine cavity with cotton saturated with tincture of iron, but with no better success. Then I tried subsulphate of iron, and after this, plumbi acetate; but with no better result; for each time the tampons were removed from the vagina, there were also six to eight large coagula to be removed.

The blood in the beginning presented the usual color, and coagulated firmly, but later in the attack it became pale and watery. All this time her sufferings were intense, as all the tissues of the body were starving, and her condition was most distressing. The pupils dilated to their fullest possibility, and paralysis first of one side and then of the other quickly followed. The paralysis was transitory in character, but complete while it lasted. There was numbness of the extremities, panting respiration, and an insufferable sense of suffocation. Her pulse was rapid and weak—at times merely a flutter. Her temperature was sometimes below normal, and her thirst was unquenchable. She wanted something to drink every five minutes; but this only provoked vomiting, and I limited her to half hour time, but this was almost intolerable. I gave her small doses of champagne, which the stomach retained longer than it did anything else; but for three weeks starvation seemed inevitable, and heart failure hourly threatened to close the scene.

Finally, as a last resort, I gave her all the champagne she could drink, hoping thereby to set up a greater state of excitement in the stomach than there was in the uterus, and thus attract the blood from the uterus. In this I acted upon the theory of Dr. I. N. Danforth, of Chicago, "that the blood will rush to the place of greatest excitement;" and in this I was not disappointed, for the hemorrhage ceased, and from this time she began to recover.

She progressed well for three weeks, when epistaxis came again, and she nearly bled to death; but she rallied again, and made a good recovery. I then put her on tonic treatment and on small doses of ergot, continued for a considerable length of time. I recommended careful diet and moderate outdoor exercise, but the nose bleeding came on often, and so did the black spots, and in less than a year she had another attack,

which, in every particular, was as bad as the first. Unfortunately she had lost her desire for champagne; so when stimulants were needed, they had to be given per rectum. This time the subsulphate of iron was the agent which arrested the hemorrhage. After this I stated the case to our highly esteemed Professor of Gynecology, the late Dr. Byford, and he replied that such cases were of rare occurrence and very dangerous, and a cure could not be expected, but said possibly the trouble might be modified somewhat by the continued use of small doses of ergot, and of the mineral acids, especially sulphuric acid. The patient had become disgusted with ergot, so I gave her the acids, but derived very little, if any, benefit therefrom, for in less than six years she has had six of these terrible attacks, each one, if possible, being worse than the preceding. The last attack commenced in May and lasted until the latter part of June of the present year, and was more obstinate than any preceding attack. This, I think, was largely due to excitement, followed by disappointment, but she recovered as usual. The restoration of the lost blood in her case has always been very rapid.

I have tried everything that suggested itself to my mind, as alteratives, tonics and hemostatics; but of all the remedies used locally, Monsel's solution has given better results than any other. Palliative measures are of no use in this case; and it is only by the most persistent employment of both mechanical and chemical means that any good can be derived therefrom. There is no misplacement or morbid condition of the generative organs. The uterus and its appendages, so far as I can determine, are normal, except at the time of profuse hemorrhage; then there is relaxation and lack of tonicity; the cervix is soft and flabby, and the os is sufficiently open to admit the end of the finger. I can attribute this strange condition only to imperfect development of the blood-vessels, the walls of the smaller tubes and capillaries being so thin as to be unable to resist the pressure, and thus readily allow the blood to be continually oozing somewhere. But as these spontaneous hemorrhages show a marked tendency to occur from mucous surfaces, because their vessels are less well supported here than in other parts, it is the more likely to take place from the mucous membrane of the uterus because of the great normal fluctuations in the circulation of that organ.

This is a case which, I think, will tax the patience, the skill and the ingenuity of whoever has charge of it. Gladly would I have given it up years ago, but the patient's parents would not hear of it. However, a few weeks ago, I was somewhat surprised by her father coming in to tell me they had adopted a new plan of treatment with their daughter. I asked if they had concluded to try the hygienic measures I had so long recommended, such as moderate exercise, plenty of fresh air and sunshine, and not allowing her to sleep more than half her time. He replied, "No," but they had taken her to a Roman Catholic priest, who claimed to possess the power to heal, and after fully stating her case to him, he positively assured them he could cure her, and, although he had never seen this young woman before, he told them he had cured twenty just like her. He furthermore said he was the only one in America that had the "specific" for this malady. I remarked that it was very singular that this priest, who is not a physician, should have had so many cures like hers, when not one physician in a hundred in active practice has seen a case just like it.

Dr. Byford, in his excellent work on *Diseases of Women*, in alluding to the hemorrhagic diathesis, mentions one case belonging to this class, that came under his own observation, and the patient died with her second menstrual flow. He said "these cases are of rare occurrence."

I asked the father if he knew what the "specific" was, and he replied, "certain herbs steeped in whiskey, of which a wine-glassful is to be taken three times a day." The family are Catholics, and this young woman fully believes the priest will cure her; so I shall have an opportunity of seeing, in this case, how far the mind can influence the body.

#### PERFORATIVE APPENDICITIS.<sup>1</sup>

BY H. REINEKING, M. D.,

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It is not my purpose, in presenting this brief paper, to discuss the subject announced in the title, or even to review to any extent its literature, but simply to add to the recorded clinical data bearing on this subject,

two cases that recently came under my observation.

*Case 1.* Henry C., 12 years old, whose previous health had been good, was first seen by me on October 5, 1890. On the evening of October 2, he took a very hearty supper, consisting mainly of baked beans. During the same night he was seized with severe pain in the abdomen, most intense in the epigastric and umbilical regions. There was great restlessness, nausea and vomiting of mucus but not of food. After a dose of castor oil he had what is said to have been a free movement of the bowels the following night. The pain, however, continued with lessened severity, gradually shifting more towards the right side, until it became pretty well localized in the right iliac region, only now and then extending over the entire abdomen.

On October 5, his temperature was normal; his pulse 88, full and strong; his tongue heavily coated; and his appetite completely lost; his bowels had not moved for forty-eight hours. His urine was of normal appearance and readily passed. Vomiting had occurred very infrequently, not more than once in twenty-four hours. The pain came on in very severe paroxysms, commencing in the right side and extending over the abdomen, while tenderness on pressure was limited to the right iliac region. No induration or dullness, however, could be detected.

Large injections of water, glycerine and oil, as well as the repeated internal administration of Epsom salts, were resorted to with a view of removing any irritating material that might be retained in the intestines, but failed to bring on any fecal evacuation. To relieve pain, hot fomentations and small doses of morphia were used. This treatment was continued for several days, while the patient's condition remained unchanged, except that the vomiting ceased entirely, and the paroxysms of pain became less severe and frequent, though but very little morphia was taken. During this time the temperature and pulse varied but little from the normal.

October 13. During the preceding few days dullness and induration had developed in the right iliac region, together with slight tympanites over the remainder of the abdomen. Now indistinct fluctuation could be felt. The temperature and pulse were slightly elevated; the bowels had not moved since the third. There was no vomiting.

October 14. An operation was performed

<sup>1</sup> Read before the Brainard Medical Society, at Milwaukee, Wis., January, 1891.

for his relief. An incision about two and one-half inches long was made, two inches to the left of the right anterior superior spinous process, and a pus cavity was reached without any difficulty. It was intra-peritoneal and contained a large amount of pus, having a strongly fecal odor; but no fecal matter or other foreign body was found. A strong barrier of adhesions protected the general peritoneal cavity. Thorough exploration with the finger failed to detect the vermiform appendix, and it was therefore thought best not to push the search any further. Thorough drainage and antiseptic after-treatment were carried out.

For two days after the operation the wound was in a good condition, the discharge decreased, the pulse and temperature had been nearly normal; still it was evident that the man's general condition had not improved. His appetite was failing; his bowels were just as inactive as before the operation, failing to respond to injections as well as to cathartics, though the latter were not vomited, nor was the pain apparently increased by their use. The man's pain was not severe; and he had no chills or vomiting.

October 17 his temperature was 101° F.; his pulse 100-105; his general condition worse; his tongue dry, red and deeply grooved. Tympanites was becoming well marked. The bowels had not moved for over thirteen days.

Suspecting the existence of some further collection of pus or some constriction that might account for his failing and for the inactivity of the bowels, a second operation was decided on, with a view of finding and relieving such condition if present. The original opening was enlarged both upwards and downwards and the adhesions between the intestines and surrounding parts were carefully severed with the finger. No additional pus cavity was found. The adhesions were quite extensive, but could all be reached and severed by the finger. The cæcum and ascending colon contained considerable masses of hard fecal matter, while the small intestines were filled with fluid feces and gas. No mechanical obstruction was discoverable. The appendix was closely applied to the colon along its under or posterior surface, with no perceptible mesentery, and imbedded in inflammatory exudate, so as to be distinguishable from the colon proper only by the touch. On raising it out of its bed a point was discovered on its

lower surface at which fecal matter was oozing out through two small openings.

While this perforation formed an urgent indication for extirpation of the appendix, the anatomical conditions described were such as to make this procedure an extremely tedious and difficult one. Moreover, the patient showed signs of grave shock, and it was evident that he would die under our hands, should we keep him on the table much longer. The oozing points were therefore carefully stitched over with a few Lembert sutures, and the appendix was left. The wound was partially closed and packed and an antiseptic dressing was applied. In spite of all efforts at restoration the patient died in about two hours.

The *post-mortem* examination revealed little that had not been found during the operation. There was no general peritonitis, no mechanical obstruction of the bowels, no leakage, even under pressure, at the point of perforation. The mucous lining of the appendix showed several ulcers, one at the point where the perforation had taken place. Death was no doubt due to the shock of the second operation, added to the already existing exhaustion.

One question that suggests itself in connection with this case is that concerning the cause of the obstinate constipation. In the absence of any evidence of mechanical constriction, it can only be explained either on the theory of a so-called septic paralysis of the bowels, or by attributing it to the extensive inflammatory adhesions and extension of the inflammation to the muscular coats of the intestines. Considering the small amount of morphia taken, and, on the other hand, the persistent efforts made to bring on a movement, all in the absence of vomiting, the total inactivity of the bowels for over two weeks is somewhat remarkable. Another question, and one closely allied to the first, is, whether it would not have been better to have persisted in searching for the appendix at the time of the first operation; as at that time the patient's condition was such that its removal could have been safely accomplished. As the origin of abscesses in this region is almost invariably located in the appendix, it would seem a good rule not to rest until it has been found and examined, unless there are plain contra-indications to such procedure.

*Case 2.* Frank B., the patient, was 22 years old and a mason. The following is a short synopsis of the history kindly fur-



nished me by the attending physician, Dr. Schaper.

Pain in the right iliac region was first noticed November 7, 1890, and was soon accompanied by vomiting. The bowels were constipated, but acted after taking a laxative. On November 10 the temperature was 100° F., the pulse 76, the tongue coated and dry, and there was a small, firm mass and dullness at the site of the cæcum. Treatment consisted of rest, hot fomentations, repeated small doses of Epsom salts, with sufficient morphine to relieve pain. The general symptoms increased slightly in severity, while the induration and area of dullness enlarged pretty rapidly until November 17, the tenth day after the onset of the symptoms; when the man had a severe chill early in the morning, followed at once by vomiting and a large evacuation from the bowels. At the same time the temperature rose to 105.2° F., the pulse to 120. Both were, however, considerably reduced again in a few hours.

I saw the case with Dr. Schaper on the afternoon of November 17. The swelling in the right iliac region was considerable, extending to the median line, and indistinct fluctuations could be detected.

An incision three and one-half to four inches long, running parallel to the axis of the cæcum and directly over this organ, was made, and this was followed, on opening the peritoneum, by the evacuation of a large amount of pus, having a strongly fecal odor. At the bottom of the abscess I found an oval lump of dry, hard feces, about one-half inch long by one-third inch thick. The appendix was found floating freely in the contents of the abscess, and provided with mesentery only to a limited extent at and near its base. It felt ragged and very much thickened, and tore easily. It was tied with two ligatures close to its attachment to the cæcum, and was removed. Owing to the protective wall of inflammatory adhesions running transversely across the lower extremity of the cæcum, this part of the bowel could not be drawn out sufficiently to sew the peritoneum over the stump without using undue traction, hence this otherwise important precaution was dispensed with. After complying with all the usual antiseptic precautions, two large drainage-tubes were inserted and the wound closed.

In the further history of the case the following points may be worth mentioning. The temperature and pulse soon came down

to the normal and remained so. Fecal odor of the discharge was noted until November 20—three days after the operation. The bowels moved normally, under repeated administration of Epsom salts. The stitches were removed on the seventh, and the drainage-tubes were left out on the tenth day. On the twenty-second day a small subcutaneous abscess was opened near the point where the drainage-tubes had protruded; and three days later two ligatures and a small, hard, shell-like substance were discharged, after which permanent closure took place.

## HISTORY OF BACTERIOLOGY.<sup>1</sup>

J. LEFFINGWELL HATCH, B. Sc., M. D.,

LECTURER ON BACTERIOLOGY, AND ASSISTANT DEMONSTRATOR OF MORBID ANATOMY IN THE UNIVERSITY OF PENNSYLVANIA; ASSISTANT PATHOLOGIST TO THE PHILADELPHIA HOSPITAL.

The knowledge of microscopical organisms naturally advances hand in hand with the science of optics, and although the ancients believed the air and water to swarm with beings of such small size as to be invisible to the naked eye, yet it was mere hypothesis and lacked ocular demonstration. To Leeuwenhoek, a naturalist of Holland, was reserved the honor of discovering and first describing the bacteria. This he did in his work entitled *Arcana Naturæ Detecta*, printed at Delphis Batavorum in 1680. His observations were made with simple bi-convex lenses fixed in a silver mounting. In order to give a comparative estimate of their size, he placed a grain of dust one-quarter of a millimeter in diameter under the same lens with the bacteria, and thus approximately measured them. In spite of instruments so crude, he was able to describe several species, and point out the great rôle that they play in putrefaction and decomposition. He pointed out their presence in water, in vegetable infusions, in the intestines of flies, frogs and chickens, in the feces of man, and recognized the fact of their augmentation in diarrhoea, the first application of them to human pathology. He also demonstrated their presence in the tartar of the teeth and in saliva. It was a great event for those times and made quite

<sup>1</sup> Part of a Lecture delivered before the Philadelphia College of Pharmacy, December 9, 1890.

a stir in the scientific world. One does not know which to admire the more—the nicety of the results announced, or the skill of the experimenter.

After Leeuwenhoeck, the study of microscopical beings was neglected for nearly a century. The difficulty met with in their study, by means of simple lenses, was enough to turn less hardy observers than Leeuwenhoeck to one side, and it was not until the discovery of the compound microscope that anything further was done towards investigating them.

It was Otto Frederic Müller who first applied the compound microscope to the study of the lower organisms, and he described and classified them in his two works. The first, *Vermium Terrestrialium et Fluvialium Historia*, published in 1774, and the second, *Animalcula Infusoria Fluvialia et Marina*, published in 1786. It was he who had the honor to put in order this crowd of microscopical beings, that the great Linnæus himself believed ought to be placed to one side, and for which he created his genus "chaos," a veritable "caput Mortuum," where all sorts of beings and things are jostled together.

Müller divided the bacteria into two genera: "Monads" and "Vibrios," which names are handed down to us to-day.

The species of the genus *Monas*, incompletely described and badly figured, are scarcely recognizable; two of the ten species that he includes here are certainly short, rod-shaped bacteria—bacilli. He described thirty-one species under the genus *Vibrio*, of which, however, only six are true bacteria. The other forms are really Algæ, Desmids, and Diatoms. His *Vibrio lunula* is a Closterium, his *Vibrio acus* is an Englena, one of the flagellate infusoria. Among the ciliated infusoria to be found in his genus *Vibrio* are the Paramoecii, the little slipper animalcules, and of the Nematodes, the Anguillulæ.

Lamarck, in 1815-1819; Bruguière, in 1824; and Bary de Saint Vincent, in 1824, have confined themselves in their works to reproducing, intact or but little modified, the gifts of the Danish naturalist, so that up to the year 1833 little progress was made beyond what Müller had done in the eighteenth century.

Ehrenberg is the next to attract attention. Using perfected instruments, he made great progress in the study of microscopical beings. It was at about the time that the

botanist Schleiden was carrying on his studies in plant histology, studies the result of which was to agitate the scientific world, and form the basis of what is now known as cellular structure; I refer to his discovery of the cell in 1838. These results, as well as those of Ehrenberg, were due to the rapid advance of optics and the improvement of methods of observation.

In Ehrenberg's grand work, entitled *Die Infusionsthierchen als Vollkommene Organismen*, we find results that are greatly superior to those of his predecessors. He separates those beings which we are considering, from those that had been associated with them, although differing so greatly, and reunites them in his family of the *Vibronia*, which he describes in the following manner: "Filiform animals without intestines, naked, without external organs, united in chains or filiform series, by the effect of an incomplete spontaneous division." This family comprehends the four following genera:

*Bacterium*—Little rods, rigid, without vacillating movements.

*Vibrio*—Filiform bodies, susceptible to undulatory movements like a serpent.

*Spirillum*—Filiform bodies in an inflexible helix.

*Spirochæta*—Bodies in a helix, forming a long flexible string.

Dujardin takes the ideas of Ehrenberg and modifies them a little, in his work entitled *Histoire Naturelle des Zoophytes, Infusoires*, published at Paris in 1841. Here we find new and interesting details concerning the development of bacteria in diverse infusions, and a description of the methods for obtaining and studying the different forms. The four genera of Ehrenberg he condenses into three, fusing the two forms spirochæta and spirillum into one, a movement that has since been approved by many observers, the distinctive characteristics of the two genera having only a relative value of order far too slight as a basis for separation.

The results obtained at this epoch were weighty and for the most part to be preserved; certain ones have been many times confirmed, and are still to be found in the best works.

The achromatic microscope was being perfected day by day, and in the hands of such able experimenters as Dujardin announced conclusions that could be considered as strongly supported, if everything was not made certain.

Up to this time the appearance of these beings so simple, these *animalcules* as they were called, in the infusions, was regarded as a simple fortuitous phenomenon. At the same time very appreciable alterations in the media in question were observed, but they were far from supposing that there was a relation between these two, a relation of cause and effect. If indeed they sought to connect one or the other of them with the phenomenon, it was that they might cause the second to depend upon the first, thus making a law of the ancient adage: "*Corruptio unius, generatio alterius*." And, as Leeuwenhoek had regarded the considerable augmentation of microscopical beings in the stools of diarrhoea, so many of the *savants*, Linnæus among others, were borne by the simple views of their intellect, to consider these vibrios as the elements of contagion in many pathological states, although nothing positive had been advanced, and not a single fact was forthcoming to support the entirely gratuitous suppositions. The minds of scientists were so little turned from this direction, that Devaine and Rayer, in 1850, pointed out, quite simply and merely as a curious fact, and without attaching any great importance to it, the presence of rod-shaped bacteria in the blood of animals dead from the curious disease called "*sang de rate*."

The auspicious moment at last arrived, and Pasteur appeared on the scene. He established with certainty the close connection, or the relations of cause, which unite the alterations in certain liquids, certain fermentations, to the development and to the life in the interior of the most simple living beings, the bacteria. In his work on lactic fermentation he has laid the first certain foundation of bacteriology, by the physiological study of these beings. What he demonstrated for this fermentation, he extended to others, and arrived in forming that train of studies which constitutes one of the most glorious scientific achievements of France.

Guided by the principles that as master Pasteur promulgated, Devaine went over the observations that he had made several years previously with Rayer upon the blood of the spleen, and was able to establish by a series of experiments, and a line of able deductions, that the cause of the malady was certainly bacteridian, as bacteria were found in great abundance in the blood of sheep ill or dead from that disease.

Pasteur has shown the way to follow in

elucidating in all its details a terrible disease, the ruin of the raisers of the silk worm, "*la flacherie*," as it is called in French, which is manifestly bacteridian in origin. It was the first complete study of a contagious affection, and since then from these remarkable teachings luminous conclusions have been drawn relative to the study of maladies recognized to be of the same origin, when the same question of contagion, of recidity, of heredity, of media, which play so great a rôle in the etiology, and the pathogenesis of infectious diseases arise.

Koch, following in the footsteps of Pasteur, has made remarkable advances in the science of bacteriology, introducing certain refinements into the technique which have facilitated the study, and laid a basis for a more exact classification.

We must not forget to mention the names of Brefeld, Van Tieghem, Prazmowski and Buchner in connection with Koch, as they have played a prominent rôle in work in which he was the pioneer, and they have all been followed by able investigators in many countries. The great feature of Koch's work was the pointing out of the advantage of a solid medium, but gelatine had already been employed by Vittadini in 1852, and potatoes and turnips had been used in Germany.

Coze and Feltz, in 1872, showed that the profound changes in the blood, in the infectious diseases of human beings, were also due to the bacteria, and they made an exhaustive study of one of the most terrible of those affections, viz.: *septicemia*.

The most beautiful applications of these second ideas are found without contradiction in the researches upon anthrax, where men like Koch and Pasteur have exerted themselves to the utmost, and have been able to make the study of this malady the basis of the germ theory of contagious diseases.

Since then this science has advanced with a rapid stride, thanks to the labors of assiduous investigators throughout the world, among whom to be noted as the foremost, besides those already mentioned, are Chauveau, Cornil, Chamberland and Roux, in France; Klebs, Flügge, Gaffky, Löffler, Eisenberg in Germany; Lister, Crookshank and Klein in England; Sternberg, Formad, Shakespeare and a few others in America.

The morphology and the physiology of the bacteria, after having been in great honor, has unfortunately been relegated to a second place, and almost eclipsed by the



interest and splendor of the grand pathological gifts; and in spite of the labors of such botanists as de Bary, Nägeli, Cohn, Zopf, and physiologists like Duclaux and Pfeifer, the progress of bacteriology as a science has been slow.

Much work has been done that is useless, and many erroneous conclusions have been drawn, yet on a whole there has been laid a solid foundation, and ways have been opened along which the careful observer can reap a rich harvest.

## REPORTS OF CLINICS.

### BUFFALO GENERAL HOSPITAL.

#### GYNECOLOGICAL CLINIC—DR. MANN.

##### Polypus Uteri.

Dr. Mann presented a woman whose symptoms were so indefinite that no further diagnosis could be made than of some pelvic trouble. Examination showed a polyp projecting from the external os and apparently attached by its pedicle at the internal os. This might be malignant, or an adenoma or a mucous polyp. If it were malignant, Dr. Mann said he would resort to high amputation of the cervix. Referring to the relative merits of high amputation of the cervix and total extirpation of the uterus, he said that he regarded total extirpation as a perfectly justifiable operation. He had done it four times with one death, immediately following operation, due to the growth of the cancer in the broad ligaments. It was so soft that its presence in the broad ligaments could not be diagnosed at the time of the operation. The three other patients, however, died within a year, from recurrence of the cancer. He had known one patient to live ten years after high amputation, a longer duration of life than had occurred after hysterectomy in his experience. Considering the difficulties and dangers of total extirpation of the uterus, and believing that the duration of life was at least as great after the less radical operation, he preferred high amputation of the cervix—the general opinion of the profession.

After a more careful examination, it was decided that the growth was not malignant, and it was removed with the chain ecraseur,

although Dr. Mann does not consider it a scientific instrument, not even believing that it has the advantage of diminishing hemorrhage. The tumor was somewhat modulated, irregularly spherical and about one and a half inches in diameter. After swabbing out the vagina, it was tamponed with pledgets of non-absorbent cotton dipped in hydro-naphthol solution and sprinkled with iodoform.

Dr. Mann advised the removal of such pediculated tumors as soon as their presence was noted. They were almost certain not to be malignant, and they could be easily twisted off with polypus forceps, or snipped off with scissors, and the vagina tamponed. Any one could do this operation. Dr. Mann spoke of his chagrin after being summoned one hundred miles into the country, to operate, to find that the tumor was of this nature.

Although insignificant at the outset, these tumors may later cause much harm. Dr. Andrews, of the Buffalo State Insane Asylum, once called Dr. Mann to operate upon a maniac with the following history. The patient had a little mucous polyp, which the late Dr. Miner wished to remove ten years ago, but operation was refused. The tumor, as is frequently the case, caused profuse menorrhagia, on account of the congestion of the tumor from compression of its pedicle at the menstrual period. These hemorrhages resulted in anemia and neuralgia, the latter affecting the pelvic organs especially. Narcotics and alcoholics were used to control the neuralgia, and the woman acquired both the morphine and the whiskey habit. Her mind had become utterly destroyed. Dr. Mann removed the tumor, the patient made a good recovery from the operation, and within a year she was restored to her family and to society perfectly cured, and she has remained well since.

Dr. Mann advised that after removing a tumor of this sort, the patient be directed to return in a week, so that if other tumors were present they might be removed.

##### Extra-uterine Pregnancy.

Dr. Mann showed a specimen removed from the pelvis of a woman by abdominal section.

The history was apparently that of an abortion at the third month, but no fetus had been seen. There was a mass to be felt in the pelvis, and from its presence and the history of the expulsion of the decidua with-

out a fetus, the probable diagnosis of extra-uterine pregnancy with rupture was made.

A cyst was found containing several large blood-clots. It proved to be the Fallopian tube, which had burst between the layers of the broad ligament, and the contents of the cyst had dissected their way into the substance of the broad ligament. The cover of the sac was a large piece of omentum, which was removed. The sac held nearly a pint of blood clots. The membranes could be made out indistinctly, but the fetus had disappeared, probably by absorption. After removing the sac, drainage was provided for though the abdominal wound.

### PERISCOPE.

#### Excision of Lupus with Immediate Skin Transplantation.

Dr. Geo. Ryerson Fowler, surgeon to the Methodist Episcopal and to St. Mary's Hospital, Brooklyn, reports in the *British Medical Journal*, February, 1891, a very good result from excision and immediate skin transplantation for lupus. He says: Mrs. O'B., aged 65, was kindly referred to me by Dr. Sidney Allen Fox, of this city, with a well-marked lupus exedens of the nose. The entire integument of the nose, with the exception of a small point at its tip, was involved in the disease, the ulceration extending upon the cheeks, and to the inner canthus of the left eye as well. Beyond the area of ulceration there were several suspicious tubercles. The patient states that the disease began many years ago with what seemed like a small pimple upon the left side of the nose, which, after several years, began to ulcerate. This ulceration progressed slowly, new tubercles making their appearance in the immediate area of the surrounding integument, which in their turn would undergo the ulcerative process. The superficial surface involved at the time of coming under my observation measured 5 ctm. in a vertical direction by 7.5 ctm. transversely.

On April 14, 1890, at St. Mary's Hospital, the following operation was performed under ether: The entire diseased surface was circumscribed by an incision extending through the thickness of the skin to the subcutaneous cellular tissue. This was made to include all suspicious tuberculous tissue. By the use of the scalpel and curette the structures thus marked out were thoroughly

removed, stopping short only of periosteum and bony structures. By means of hot salt water compresses and firm pressure the hemorrhage was arrested, but one ligature being required. The patient's left arm in the deltoid region was then disinfected, and Thiersch's method of skin grafting followed, the strips of skin being immediately transferred to the surface upon the nose and face from which the lupus tissue had been removed. The strips were laid side by side, their edges slightly overlapping each other, until the entire surface was well covered in; nine strips were required. The parts were then dressed by being first basket-strapped with narrow strips of oil silk until all the grafts were thus protected. Over this were then laid several thicknesses of gauze wrung out of a sterilized salt solution, the whole being held in place by a moderately firm gauze bandage.

On the third day the dressings were removed and replaced, the oil silk permitting of the lifting away of the gauze compresses without disturbing the transplanted strips. Every strip seemed to have secured a hold, and this was confirmed at subsequent dressings, which were repeated at intervals of two days. The oil silk strapping was found to act most efficiently as a means of maintaining a certain amount of moisture of the transplanted strips, which latter particularly I have found to be quite essential to success in this method of skin transplantation.

As the case progressed, the edges of the transplanted strips, which had been permitted to overlap the healthy skin in order to allow for shrinkage, were gradually trimmed, care being taken to still leave sufficient of the strip to prevent the formation of cicatricial tissue at the point where these joined the limits of the circumscribed area. In fourteen days the healing was complete, but the patient has been kept under observation until the present time for the purpose of determining the curative effects of the skin transplantation upon the lupus. There has not been the slightest suggestion of a recurrence of the disease.

The method of treatment here pursued is that which was introduced to the profession by Senger, of Krefeld. In order to prevent the recurrence of the disease in those cases in which the gap cannot be closed by suturing, and where heretofore it has been necessary to permit of slow granulation and cicatrization of the parts following excision, Senger recommends that skin transplan-

tion by the method of Thiersch be at once practiced. He describes a case in which he employed this method with, success, the disease having made considerable progress upon the cheek and upper lip.

### Iodoform-Ether-Glycerin Injections in Septic Cavities.

Dr. John R. Haynes discusses, in the *Southern California Practitioner*, the use of iodoform dissolved in ether and glycerin as an antiseptic in gynecological and surgical practice. There is, of course, nothing new in this application of iodoform, but Dr. Haynes cites cases illustrating a valuable method of treatment. The following was the formula used :

R. Iodoform . . . . .	3 ss
Ether . . . . .	f 3 i
Glycerin . . . . .	f 3 iii

A woman was allowed to retain the decidua of a two-months' miscarriage for ten days, notwithstanding septic symptoms had developed. On the tenth day Dr. Francis Haynes saw the case in consultation. The uterus was held fast by a swollen adherent tube, rendering the subsequent process somewhat difficult. Under chloroform it was dilated with Goodell's dilator, and a large quantity of decidua removed by the curette. Copious irrigation. The temperature fell from 104° to normal, but in two days rose again to 102.6°. After copious irrigation, a portion of iodoform mixture was injected.

The method of cleaning and disinfecting the uterus was as follows: The patient was brought to the edge of the bed, the legs wrapped in blankets, the bed protected by oil-cloth, forming a water shed into a tub. The vulvar hair was clipped, and the vulva was carefully cleaned. The vagina was irrigated with half a gallon of hot water, then with a quart of 1 : 2,000 sublimate solution, then with hot water. A double tube, which had just been boiled, was attached to a fountain syringe and introduced into the uterus under guidance of the finger, taking care not to introduce air. Two quarts of hot water were used; then a pint of 1 : 5,000 sublimate solution, then a quart of hot water. The fountain syringe was now detached and a short piece of rubber tubing attached to the end of the double tube, through which, by means of a large glass syringe, an ounce of solution of peroxide of hydrogen was

very slowly injected. Next one ounce of the iodoform mixture was very slowly injected. Of course most of it ran out through the double tube, which was now removed. A pad of thick sublimate gauze was now adjusted to the vulva. Recovery was rapid.

A man had an abscess near the right lobe of the prostate. It was feared that it would break into the bladder or rectum, or both. With a long narrow bistoury, the abscess was reached from the perineum. A drainage-tube was inserted, passing up four and one-half inches, and essentially the same process as that just described was gone through. This was repeated morning and night for three days, when the drainage-tube was removed. Very slight discharge followed, and the man made a rapid recovery.

A woman had peritoneal abscess reaching from the left iliac fossa to within two finger-breadths of the left costal margin, nearly to the lumbar region on the left side, and to beyond the linea semi-lunaris on the right side. It was opened by an incision admitting two fingers; the peritoneum was sewed to the skin, irrigated and drained. Next day the process described was repeated. The temperature, which had ranged from 100° to 104°, went to 99°. On the third day it rose to 99½°, and the treatment was repeated. The treatment in the interval consisted merely in renewing the sublimate gauze, dressing occasionally when it became stained by a thin, yellowish discharge. The patient was kept in bed a month, and at the end of two months she was perfectly well, except that a slight thin discharge continued from the seat of the abscess.

The aim was to repeat the process only when a rise of temperature or the presence of pain indicated that pus was accumulating in the cavity. During the entire treatment the process was repeated three times.

### Early Treatment of Otitis.

In the *Medical Record*, February 7, 1891, Dr. Sexton writes: The medical man who sees a case of otitis media which has suddenly developed during the progress of catarrhal inflammation of the air tract of the head, whether consequent on scarlet fever, cold in the head, or other affection, assumes a serious responsibility unless well informed in its management, since under certain conditions a seemingly mild case may speedily



become most painful and grave. I have recently been reminded of the perplexity, not to say apprehension, felt by the conscientious practitioner when untoward symptoms develop, several distressing cases coming under my observation in consultation with other physicians. The urgency of the cases seen was no doubt due to the severe winter weather of late prevailing. I hope I may be permitted to offer some practical suggestions drawn from such experience, since they may be of interest to others when in doubt as to the best course to pursue.

It would be out of place here to go far into the pathogenesis of otitis, but we may assume that acute middle-ear affections are, generally speaking, divisible into two principal groups; namely, mild and severe. The mild ones are usually preceded by more or less earache, which almost wholly disappears on the occurrence of a discharge from the ear. The pain is due to inflammation of the mucous-periosteal lining of the drum (inflammation limited, indeed, for the most part to the atrium of the drum) and the confinement of secretions, which may be either moderate or profuse in quantity. Beyond cleansing the organ by means of cotton-wool pellets and very gentle syringing while discharge lasts, these cases had best be let alone for the most part, inasmuch as they have a tendency to spontaneous recovery. Though those cases often get well despite misguided treatment one should never be lulled into unguarded security, whereby valuable time may be frittered away in useless treatment when severer symptoms may be impending. In a severe case it would seem almost impossible to be mistaken in diagnosis if the ear were properly examined even before the more urgent symptoms fully develop. The pains and headache are soon unrelenting, unendurable, more agonizing, perhaps, than the pains of almost any other disease, and they demand instant relief, if attainable.

Much blame, we fear, for children's dreadful sufferings specially, not to mention the imminent danger to life, frequently lies at the door of writers who fail to differentiate between mild and severe cases, and who too often recommend for both of them such treatment as may, for the most part, be found among the rubbish of ancient writings called medical; methods meddling and often brutal when zealously employed; liable, indeed, to be followed by sad results, now and in the future. Waste

no time, therefore, in temporizing measures, since the relief to be had should be quickly sought. So soon as the pains are great, no relief following the discharge, if any occurs, and the upper edge of the drum-head becomes red and bulging, it may be suspected that the gravity of the symptoms is mostly due to the confinement of secretions in the bony chamber comprising the loft above the main cavity of the drum—the attic of the drum in fact—a space lying almost entirely above that part of the drum which is seen on looking into the ear to be covered by the drum-head. The swelling of the lining membrane of this unyielding bony cavity closes the natural outlet for secretions, which can now only escape from the attic by dissecting their way slowly underneath the membrana flaccida and finally appearing as a tumefaction there or further along the bony portion of the external auditory canal. Finally, the mastoid process or general outer surface of the temporal bone may be invaded with formation of abscess of varying proportions.

The onset of this unfavorable process must be recognized at once if we would prevent extensive trouble; puncturing the drum-head low down, blistering, leeching, poulticing, etc., will do no good; indeed, quite the contrary, since they may distress the patient and increase the local irritation. As the invasion of the trouble is rapid, so the remedy should be sure and swift; no stabbing the drum-head in the dark or fruitless incisions into the canal. Let a careful examination of the parts (patient narcotized if unable to remain quiet—which in children cannot be expected) with the electric lantern worn upon the forehead be made. Fortunately we may now, if timely, relieve the symptoms at the start, by thus liberating the fluids in the attic and establishing drainage, an operation based upon the principle inaugurated in the treatment of these parts by Wilde, who waited, however, until much damage had been done before seeking to give relief by letting out matter presenting at the mastoid process.

Do not, therefore, wait for days while more and more damage is being done, when the extension of inflammation from the seat of the disease may be prevented by a fine incision through the membrana flaccida, a proceeding speedily followed by relief in most cases, and in many by a speedy cure. To make the incision a small, sharp-pointed bistoury, the shank of which is set at a con-

venient angle to its handle, should be employed. The point of the instrument is then to be advanced through the membrana flaccida well up into the attic, and as it is withdrawn a free incision made through any bulging or swollen tissues of the canal in proximity to the membrane.

Any one who has witnessed the immediate relief following the liberation of confined secretions, specially from underneath deep fascia or the periosteum can appreciate the importance of this operation. Of the subsequent treatment but little need be said; it will depend largely upon the injury already inflicted upon the ear; if done early, usually no further special treatment will be required.

### Uratosis.

The *Montreal Medical Journal*, January, 1891, says: The term uratosis has been suggested by Sir Wm. Roberts to designate that disordered state of nutrition characterized by the deposition of the crystalline urates in the tissues or fluids of the body. By adopting this nomenclature, several advantages, it is claimed, would follow. First, a distinction would be clearly drawn between the effects of an excess of uric acid in the blood and uric acid precipitated as crystalline urate. What, if any, pathological significance the former condition has was at present unknown. The serious consequence following the latter state were well recognized. Excess of uric acid in the blood was only an exaggeration of a normal state, while deposition of crystalline urates was, in any quantity, a pathological condition. Another advantage claimed is that we would be better able to estimate the relation between the different causes that give rise to uratic deposits. When speaking of "ordinary" gout and "saturnine" gout, we use terms which, in the opinion of Sir Wm. Roberts, would be more truly expressed by "gouty uratosis" and "saturnine uratosis." It being much more likely that the gouty diathesis and lead poisoning, while differing in other respects, had one tendency or vice in common, viz., the tendency to the deposition of the crystalline urates or uratosis.

The separation of the effects of the deposition of the crystalline urates from simple increase of uric acid in the blood was of importance from a therapeutic point of view. In the former, the danger of precipitation, especially in the kidneys, was of a very grave character and called for immediate treat-

ment. By the employment of alkaline remedies, we are enabled to postpone for a long period this deposition, and thereby gain time which should be employed in combating the essential cause.

### Etiology of Extra-Uterine Pregnancy.

In the *North American Practitioner*, February 1, 1891, Dr. Bayard Holmes says: The subject of etiology in these sad accidents of reproduction are significant in relation to progress and treatment. The mother is exposed in extra-uterine pregnancy to an immediate and to a remote danger. The immediate danger is fatal anemia when rupture of a tube takes place, and the remote danger is sepsis in a limited hematoma or in a retained dead fetus. In a study of the bacterial condition of dead extra-uterine fetuses which I presented to this Society, my attention was called to the great danger of sepsis. Hematomata in other parts of the body are ordinarily removed by absorption without any febrile disturbance, except that early and transient rise which has been attributed to "ferment intoxication." The case is very different in those pelvic hematomata which are due to extra-uterine fetation. Both the retained dead fetuses and the hematomata in this region become infected, in the great proportion of cases, within six months, and a large percentage of the remainder by the end of the year. This fact, I believe, is to be explained by the cause of extra-uterine fetation, which there is good reason to believe lies in an antecedent infective inflammation in the tubes or the endometrium.

In order that an extra-uterine pregnancy may take place, there must be some *malformation or deformity* in the sexual apparatus. It does not take place in the normal condition of the tubes and uterus. That it may be a malformation we can readily see, because the present condition of the human uterus is evolved from a very large and divided uterus which is exhibited in the fetus and the lower animals. We may expect an occasional reversion to the original type and hence a risk of extra-uterine fetation. Such an arrest of development cannot often occur, because anatomists do not find these deformities frequently. Nevertheless pregnancy in a rudimentary form is not unknown. A step further and we have a tubal pregnancy.

Dr. Christian Fenger presented at a recent meeting of the Gynecological Society a tube, in the distal third of which there was a two-months' fetus. Its passage into the uterus seemed to have been impeded by an ovum which had previously attached itself to the wall of the tube and grown so far as to occlude its lumen.

Most cases of extra-uterine pregnancy are preceded by a long term of sterility following an unhealthy puerperium, which in itself points to some deformity in the sexual apparatus, arising from one cause or another. It is probable that most of these cases of deformity are due to a process of inflammation, and that inflammation is due to sepsis, and sepsis is due to infection; that accounts for the presence, in close proximity to this extra-uterine fetus, of septic material which converts the hematoma into an abscess. Of course we must always consider the possibility of pressure atrophy between the heavy, dead fetus and the contents of the bowel (hard feces) opening a communication between the bowel and the fetus and producing infection in that way. That must be considered in these cases, but it cannot well be considered in cases of large accumulations of blood. We cannot consider the possibility of suppuration or any septic decomposition of a large mass of blood without infection; that is impossible. Infection is rare through the circulation, but it is not wholly unknown. Therefore I look upon the indications for operation to be these two: The dangers from hemorrhage and the dangers from sepsis. But the danger from sepsis is imminent on account of the probable etiology of extra-uterine fetation.

### The Digestive Troubles of Infants.

The Paris correspondent of the *Archives of Pediatrics*, January, 1891, gives an account of Le Gendre's treatment of the digestive troubles of infants. The causes of these troubles are to be sought in the fact that the babies are bottle-fed. It would appear that French mothers will neither nurse their infants nor employ a wet nurse. When the troubles occur, instead of diminishing the supply of food, which ferments and occasions the disturbance, the infant is given more milk because it cries and is thirsty. Water or a carbonated water would be better. Sometimes the system becomes intox-

icated by the products of fermentation, and death ensues.

In the early stages it is proper to suspend alimentation. In the later stages, when there is much fermenting matter in the bowels, empty them with calomel, and then give the antiseptics—resorcin, benzoate of soda, salicylate of soda, salicylate of bismuth, naphthol, etc. If one is called still later, when there is fever, flat belly, no urination, or very little, convulsions and coma, then no purgation or antiseptics are of use; we must then use stimulants to the nervous system, hypodermic injections of ether, camphor or caffeine, mustard baths, or wine baths, while friction is used to the skin. By the mouth, every quarter of an hour, give a teaspoonful of sherry, port or champagne which has been mixed with one-half water. Rectal injections of meat extracts or wine may be tried also, and, indeed, they should be relied upon for some hours afterwards before returning to milk alimentation by the mouth. Even when the milk is used it would be well, in serious cases, to give also, every half hour, before nursing, a rectal injection of one to one and one-half ounces of meat (soup) containing two and one-half drachms of dextrin. If the digestion continues to be difficult, the following potion may be used:

R. Pepsin . . . . .	gr. xv
Acid. hydrochl. . . . .	m. viiss
Sacch. . . . .	ʒ iiss
Aque destill. . . . .	f ʒ iiv
M. Sig. Teaspoonful after nursing.	

### Regulation of Prostitution in Missouri.

The *Weekly Medical Review*, February 21, 1891, says that a bill has been introduced and is now pending before the Missouri Legislature, which provides that the boards of police commissioners in all cities of the State having the same, are required to make a complete list of all houses of ill-fame, and of all fallen women, revising this list as occasion may demand, and furnishing it to the boards of health, giving the names, aliases, ages, and former occupation of the women, together with such particulars as may be of statistical and sanitary interest, the record to be kept in the office of the Clerk of the Board of Health, and to be open to inspection to the members of the boards and the Municipal Assembly only.



Each keeper of a house of ill-fame shall be required to furnish complete information to the board and its agents of the particulars set forth in section 1, to give notice of any change that may take place in ownership or with respect to the inmates. Any person failing to comply with such requirements shall be guilty of a misdemeanor.

The police boards are to set apart a district consisting of not more than one-twentieth nor less than one-fortieth of the total area of the city, and as far as possible outside the residence section, wherein fallen women may live. This district shall be divided into sub-districts, and for each sub-district shall be appointed a regular physician whose duty it shall be to visit at least once a week each of the houses and women appearing on the list furnished by the board for his sole use and inspection. Such physician shall inquire into the condition of the women, and make such orders as are necessary. He may cause their removal to the hospital or hold them under bond of from \$300 to \$500. He shall make a weekly report to the Board of Health concerning each house and the condition of the inmates, and the keeper of each house shall pay to him \$1 per week for each such inmate, this money to be delivered to the Clerk of the Board of Health, subject to the order of the board. Any person violating the order of such physician, or in any way obstructing him in his duty, shall be deemed guilty of a misdemeanor and fined not less than \$20—provided that any person may within three days of the issue of the order appeal from it in writing to the Board of Health, which shall thereupon grant a final hearing.

The Board of Police Commissioners, upon the request of the Board of Health, shall have the power to suppress any house of ill-fame within any locality they may from time to time designate, or the keeper of which disobeys any lawful order. A fine of not less than \$20, nor more than \$500, may be inflicted upon any person violating such conditions by persisting in a course contrary to the law.

The boards shall, if necessary for the purpose of carrying out the provisions of the foregoing section, establish a refuge or reformatory wherein fallen women who desire to lead a virtuous life, but are unable to obtain remunerative employment or are physically unfit to perform work, may be sheltered and placed in some position where they can maintain themselves honorably.

## Meat Juice and Glycerin Applied Externally.

Dr. E. H. Lewis, of Culpeper, Va., writes to the *Virginia Medical Monthly*, February, 1891, that he had as a patient, a two months' old baby, born in the seventh month of gestation. It was very small—weighing after birth, only about  $3\frac{1}{2}$  pounds—clothing and all. In this puny condition, the child took cold and appeared to be threatened with broncho-pneumonia. As a result of its inability to cough up the secretions, spasms set in, and life was almost extinct when I responded to the hasty call. Indeed, for some minutes after my arrival, no signs of life could be detected. Yet by vigorous continuous rubbing the body with equal parts of whiskey and water, life was sustained until evidences of it became apparent.

At this stage Dr. Lewis prescribed a mixture of cod-liver oil and whiskey for friction purposes, hoping thereby to furnish some element of nourishment with the stimulant. But by mistake or misunderstanding in the hurry, a bottle of meat juice and glycerin was substituted, and the contents were rubbed all over the infant's body. In a few hours the child recovered enough to swallow, when the meat juice and glycerin were given in doses of one, two and three drops at a time as the stomach would take it. By this double administration of meat juice and glycerin—rubbing the body with it and dosing it internally—in his opinion the child's life was saved. In thirty-six hours it was taking milk as usual from the bottle, and continued to improve until now it is doing well.

Dr. Lewis says: undoubtedly in this case the skin absorbed enough of the meat juice and glycerin to furnish the requisite nourishment for the time being. And the case demonstrates the fact that the remedy can be administered successfully by the skin.

## Numerical Relation of Sexes.

The *Journal of Cutaneous and Venereal Diseases*, February, 1891, cites a paper by Dr. C. Dusing, as stating that the relation of the number of males to the number of females born is a constant one as regards man, animals and plants. In man the numerical relation of male to female is 106 to 100. In horses, male and female, it is 100 to 98.

This relationship in man is subject to va-

riation to a certain extent. For example, during war male births predominate. The absence of a considerable number of men exerts this certain influence. In favorable times not alone are a greater number of children born, but girls preponderate. In unfavorable times fewer female children are born and more boys.

Among the first births in the human species there are relatively many males. This excess is especially seen in the children of those mothers who are advanced in age when they become pregnant, and is attributable to the nutrition of the mother not being up to normal.

From the explanations, it is concluded that the sex is not inherited, but results from a combined action of causes. These factors act not only at the time of impregnation, but at various times after. From the beginning the ovule has a tendency to the development of a certain sex, and the semen possesses the same tendency; both combine at the time of impregnation to constitute one tendency, which determines the sex. Long after impregnation, when the embryo is already developed, the nutrition is still of influence, and can cause a change of tendency even if the sexual organs have begun to develop: as for example the occurrence in the mother of a poor state of nutrition may arrest the development of the female and bring about the development of male organs.

When this late reactionary influence remains absent or is not exerted strongly enough to cause a change in the development of the sexual organs, then the sex is definitely decided.

### Boric Acid in Otorrhœa.

In the *Russkaia Meditsina*, No. 30, 1890, p. 470, Dr. M. G. Tzitrin, of Simbirsk, highly eulogizes the treatment of both acute and chronic otorrhœa by insufflating finely powdered, pure boric acid. In such cases, where the discharge is profuse, the procedure should be repeated twice or thrice daily; be the secretion but moderate, one application a day is fully sufficient for all purposes. On each occasion, the ear should be previously thoroughly washed out with a tepid 2 or 3 per cent. solution of carbolic or boric acid, and then carefully dried with a plug of sublimate or salicylic cotton-wool, after which as much boric acid should be blown into as is necessary for covering the

tympanic walls and the remnants of the drum-head with an equal layer of the substance. No powder should be left in the auditory meatus itself, since the latter tolerates any pulverized substances rather badly. Under the treatment indicated, the purulent flow is said to cease in from 8 to 12 days.

### Druggists and Venereal Patients.

The *National Druggist* is published in St. Louis, and it presents in its advertising column, February 1, 1891, the following proposition to its readers.

"To retail druggists. Many of you have heard more or less of the wonderful curative properties of the Cook Remedy Company's Magic Remedy for the Cure of Syphilis.

"If you will mail us names and address of those people whom you know to be affected with syphilis, we will undertake to secure them for treatment. We guarantee to cure, or refund all money. We will reimburse you for postage, and for every patient we get out of those whose names you give us we will pay you \$25 cash. Look us up, if you will, and see that we are responsible, and that we will do as we agree. All information will be kept strictly confidential. Some druggists have already been paid by us \$125 in a single month.

"Start in at once; it will pay you."

### Test for Albumin in Urine.

A test for albumin in urine, proposed by Dr. Adolf Jones, of Vienna, is given in the *Pharmaceutical Record*, December, 1890. It is as follows: Upon a portion of the sample of urine is placed an equal bulk of strong hydrochloric acid without shaking, then from a glass pipette let two or three drops of solution of chlorinated lime fall into the tube. If albumin is present a white ring will be visible at the juncture of the acid and the urine even if present in 1 part to 10,000, which makes this one of the most delicate and easily applied tests.

### Menthol for Vomiting in Pregnancy.

It is said that the following prescription is of great value in relieving the vomiting of pregnancy.

R Menthol . . . . . 15 grs.  
Alcohol . . . . . 5 fl drachms  
Distilled water . . . . . q. s. ad 1 ℥i

M. Sig. Dose: A tablespoonful every hour.

# THE MEDICAL AND SURGICAL REPORTER.

ISSUED EVERY SATURDAY.

CHARLES W. DULLES, M.D.,

EDITOR AND PUBLISHER.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

## PHYSICIANS' ACCOUNTS.

The *North American Practitioner*, March, 1891, says that there recently occurred in the La Salle County Court of Probate, a case of important interest to all physicians. Dr. S. rendered services, medical and surgical, to a Mr. M. during a period of five years, when Mr. M. died and his will was probated. The doctor's bill (something over \$500) was presented, with affidavit, and objected to on the part of the administrators. Upon the hearing, it was shown that the doctor did not keep a ledger, but relied only on his pocket record in which he had made his charges, by signs, such as each individual physician has the habit of using. The doctor swore to each item of entry and attempted to explain what each character used meant. The defense here objected and was sustained by the Court. Then the doctor attempted to prove his books by the old

common-law rule, that is; by several witnesses who had settled accounts with him by these books; but they could not tell what charges were indicated by the signs and letters used. Then, by two brother physicians, the doctor tried to show that all physicians used the same kind of books; but they could not tell, from an examination of the books, what the services rendered were.

The judge, in deciding the case, totally excluded the books, and the doctor was defeated. The Court and defendants admitted the equity, that is, that services had been rendered, but the Court was compelled by *the law* to ignore everything because the doctor could not show that somebody else was thoroughly acquainted with his system of book-keeping.

If it be asked: Why did not the doctor keep a ledger and transfer his charges to it? Here again the law steps in and says that only books or memoranda of *original entry* can be used as evidence to prove a claim. So the ledger would not help out.

In discussing the case, the judge suggested two remedies. One that every physician should have a complete index of characters used in the book, and second, that the doctor should tell some disinterested persons, at least two, what his signs meant, so that they could testify to the same when called upon. Even this is of doubtful practicability, and, we think, of more dubious reliability in litigation. The best way to avoid such snarls is to avoid suits for professional services. Where a suit is unavoidable, we believe that it would be better for a physician to produce no books in court, and to rely upon proving his claim without them. If his books were called for by the defense, we think they would have more value as evidence than if the physician brought them forward himself. If—what is not the case—physicians kept books as merchants do, or if they kept them with the design of using them in lawsuits, a different form from that now almost universal in the civilized world would have to be adopted. Each item would



have to be entered in full—words and figures indicating plainly the service rendered and the charge made for it.

But this cannot well be, and physicians may as well know that there never has been published a single pocket record or visiting list which can be used in court as evidence to establish a claim against a debtor, under the rulings of courts which are now in force. This, we believe, is rarely of much consequence, for suits are rare, and in most cases a physician who cannot collect on such evidences of indebtedness as most physicians keep, would do well to remember what Shakespeare makes Dogberry say to the watchman who asked what he should do if a suspicious character would not "stand" when halted in the Prince's name. "Why, then," says Dogberry, "take no note of him, but let him go; and presently call the rest of the watch together, and thank God you are rid of a knave."

#### ABORTIVE TREATMENT OF SYPHILIS.

The diagnosis of chancre from chancroid is, at times, one of the most delicate, as well as one of the most difficult, in surgery. The presence or absence of induration cannot be relied upon as of infallible significance. It is on account of this uncertainty, that, in the treatment of syphilis, the prevailing method of awaiting the development of secondary manifestations, without the institution of measures directed to the removal of the primary lesion, has found the support it has. Should the venereal ulcer, by its course and sequelæ, prove to have been a chancroid, no harm has been done. If symptoms of syphilis develop, we have the means of successfully combatting them.

In the *Bulletin Medical*, February 1, 1891, Dr. Louis Jullien expresses his confidence in the possibility of aborting or modifying the course of syphilis, by excision of the primary lesion, before adjacent glands have become involved. In his opinion the chancre may be considered analogous to a malignant

tumor, the thorough removal of which, with proper antiseptic precautions, is followed by primary union, substituting, in a few days, a process which it would otherwise take weeks to complete. Two cases are reported in which, after excision of the chancre, in one case for a period of more than three years and in another for ten years, there was no subsequent manifestations of syphilis. In a third, reinfection occurred after excision. In other cases operated on, it was thought the symptoms were favorably modified.

In two cases in which glandular involvement had already taken place, injections of calomel were made. These were followed by swelling of adjacent lymphatic glands, for which the designation hydrargadenitis has been created. In neither did secondary symptoms appear.

In one other case of chancre of the glans penis and adjacent prepuce, with pronounced induration, which had persisted for a long period before cicatrization took place, in which corrosive sublimate was administered, no cutaneous eruption had been observed at the 139th day.

In estimating this report, it must not be overlooked that the evidence adduced is presumptive and negative. Every medical man knows that the only infallible sign of syphilis is the appearance of secondary symptoms, and that their absence must always as fully cast doubt upon the accuracy of the diagnosis, as suggest the efficacy of the treatment. Abortive treatment has still some who believe in it, but it is still—in the words of a well-known U. S. Senator—an "iridescent dream."

#### ELECTRICITY IN THE TREATMENT OF EXTRA-UTERINE PREGNANCY.

The investigations of the last few years have thrown much light upon the subject of extra-uterine pregnancy. Fifteen years ago it was considered a very rare condition, so rare as scarcely to be of practical interest; and when met with, medicine was practically

powerless. The physician stood by with folded hands and saw his patient die of hemorrhage; at the most he gave stimulants and narcotics. Now, it is known that ectopic pregnancy is a common condition, at least, in urban communities. It is well recognized also that its cause is antecedent salpingitis, and, best of all, instead of being almost uniformly fatal, the mother's life can now be saved almost always by prompt abdominal section, and removal of the product of gestation.

The history of the use of electricity in the treatment of ectopic pregnancy is full of interest. Introduced at a time when abdominal surgery was in its infancy, and promising to be a safe and reliable cure for a condition universally regarded as fatal, electricity, in this country, became the recognized method of treatment. This was largely due to the genius of T. G. Thomas. Every candid man must admit that much good has resulted from the labors of those who have advocated the use of electricity in the treatment of this condition. Study of the whole subject was stimulated, and the medical world was prepared for the marvels which have since been accomplished by surgical interference. With the introduction of an ideal method of treatment, electricity is falling into disuse; and would be quite abandoned, but for the efforts of its partisans. But now, even its loudest claimants award electricity only a small field of usefulness. It is universally agreed that after rupture of the gestation sac, with hemorrhage into the peritoneal cavity, electricity is useless. Life can be saved only by prompt operation. This class of cases embraces almost all seen in practice. Where extra-uterine pregnancy is diagnosed prior to rupture, the advocates of electricity claim that it should be used as a feticide, and that operation should not be done. Under these circumstances, abdominal section yields almost perfect results, and in good hands such cases practically all recover. On the other hand, evidence has accumulated that elec-

tricity cannot be depended upon to save life. Cases are on record in which, in spite of its use, the ovum has continued to develop; in which death has occurred from hemorrhage with and without rupture of the sac, while the patient was undergoing, or waiting to undergo, the electrical treatment; and in many cases in which the growth of the ovum has been arrested, a diseased mass has been left in the pelvis, liable to cause peritonitis at any time. These facts are undoubted, and they amply prove that, in this class of cases also (sac unruptured), electricity must be rejected.

The value of treatment of ectopic pregnancy, when extra-peritoneal rupture of the sac has occurred—rupture into the broad ligament—is, at the present time, unsettled. There is reason to believe that this variety of rupture is infrequent. Those who consider it frequent argue that such cases undergo a spontaneous cure, as a rule, and only exceptionally cause trouble when the ovum continues to develop, and the fetus grows until term, or when a second rupture occurs, with hemorrhage into the peritoneal cavity. In this class of cases electricity might be used to destroy the fetus, when it survives the rupture, but the unreliability of the agent will probably prevent its employment, and prompt operation will usually be done.

The evidence is plain that, while electricity was useful before the modern advances in abdominal surgery, its employment at the present time is reprehensible. Its use does not protect the woman from the dangers of rupture and hemorrhage; and, at best, after its use diseased uterine appendages are left in the pelvis.

The experience of the writer embraces nine cases of extra-uterine pregnancy. This experience helps to confirm the modern doctrine that an extra-uterine pregnancy should be regarded as a malignant tumor requiring immediate removal.

It is certain that results have been obtained by operative treatment which fully justify acting on this presumption.

## BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the *REPORTER*.]

**DISEASES OF THE DIGESTIVE ORGANS IN INFANCY AND CHILDHOOD**, with Chapters on the Investigation of Disease, the Diet and General Management of Children, and Massage in Pediatrics. BY LOUIS STARR, M. D., Late Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, etc. Second Edition—illustrated. 8vo, pp. 396. Philadelphia: P. Blakiston, Son & Co., 1891. Price, \$2.50.

The admirable features of Dr. Starr's well-known book are so familiar that an extended review seems unnecessary. The first one hundred pages are devoted to the investigation of disease and the general management of children. These pages are worth the entire price of the book. We wish the second part, on the general management of children, could be read and laid to heart by every mother. The third part treats of massage in pediatrics, and was not contained in the first edition. The author follows Murrell in his descriptions. A point to be remembered, Dr. Starr says, is that those cases in which massage is immediately followed by a sensation of comfort or by refreshing sleep are most benefited by the manipulation. On the contrary, those patients who are stimulated by it, derive little benefit and are perhaps positively injured.

The rest of the book deals with diseases of the digestive organs proper. The author has added, in this edition, sections on alterations in the odor of the breath in disease, on urine alterations, and a detailed account of second dentition and its influence on the health in late childhood: a subject which he thinks has been greatly neglected hitherto.

The whole book is thoroughly clinical, contains a large number of useful formulæ, and is just what every one who has much to do with diseases of children will find helpful every day.

**DE LA MALARIA.** BY DR. EDOUARD PEPPER, Laureate of the Faculty of Paris. Large 8vo, pp. xvi, 287. Paris: G. Masson, 1891.

Prof. Peter, in his letter prefatory to this volume, writes of the author, "Living in a village of Algiers, you have not had at your disposition any library," you say. Well, I congratulate you, for you have described facts in accordance with nature, and free from the influence of foreign ideas." This sentence furnishes a key to the characteristics of the book, although it can hardly be said that one has been uninfluenced by the views of others, who seems to be so familiar with a large variety of practical writers, and with a great variety of remedial measures, although it is true that, living apart from the influence of large cities, large libraries, and educational centres, unusual opportunity seems to have been furnished him to study the natural phenomena of the diseases which he describes, and to report the results of different modes of treatment. Dr. Pepper's book contains detailed reports of the history of a good many cases, and a very full exposition of the reasons for the views he holds in regard to his subject. The author, as an American living abroad, has retained his connection with American literature so as to be able to compare, as he does, the preparations of the American pharmacopœia, for example, with those of the French, sometimes decidedly to the advantage of the former—as in the preparations of phosphorus and hamamelis. His book contains, also, numerous refer-

ences to American writers and American medical journals, and altogether it is a very interesting study of malaria, especially in its relation to other infectious diseases of cosmic origin. The *REPORTER* does not furnish room in which to give any adequate idea of the exact nature of its contents, but the book may be commended to those who wish to study the views of one who has devoted much time to a subject of great medical importance.

**INOCULATION FOR RABIES AND HYDROPHOBIA.** A Study of the Literature of the Subject. BY SURGEON-GENERAL C. A. GORDON, M. D., C. B., Honorary Physician to Her Majesty the Queen, etc. 8vo, pp. xii, 127. London: Baillière, Tindall & Cox, 1887.

Surgeon-General Gordon belongs to that class of investigators who were not carried away by the rush of professional approval which greeted the announcement of Pasteur that he had a means of preventing hydrophobia. In England, for some time, such an attitude towards Pasteur made men singular, but it is a singularity which has been shared by some of the most prudent and discreet men of Great Britain. Surgeon-General Gordon has written several brochures on the subject of rabies or hydrophobia, and this one is of great interest and value. Opposing senseless scares, it attempts to give a rational notion in regard to the actual manifestations and best treatment of hydrophobia. It is a sensible book and calculated to be useful to all who will consider it with judicial fairness.

## CORRESPONDENCE.

## Repeated Puerperal Convulsions.

TO THE EDITOR.

Sir: Will you kindly answer through the columns of the *REPORTER* or by letter the following question, which I think important, and on which I am unable to find any literature.

Where puerperal convulsions have occurred in first labors, what are the probabilities of their re-occurrence in subsequent labors?

Yours truly,  
W. T. DAVISON.

Canton, Pa.

[It is well known that about eighty per cent. of eclampsics are primiparæ. Nearly one-third of such primiparæ die. Twenty per cent. of eclampsics are multiparæ. This percentage is made up, not only from those who have recovered from a first attack of puerperal convulsions, but also from the great army of those who have escaped eclampsia in their first labor. One case of eclampsia occurs with about every four hundred labors. Hence, in general, it is evident that if a primipara recovers from eclampsia, the prospect of a recurrence of the disease in subsequent pregnancies is slight.

But while this is true in general, it is not so in particular cases. If the eclampsia be due to chronic Bright's disease, which has antedated the pregnancy, and the first attack does not prove fatal, eclampsia and



death is almost certain to follow, should pregnancy again occur. The same is true if the eclampsia complicating the first pregnancy be due to acute Bright's disease, which becomes chronic after labor.

According to Tyson, when the convulsions are of an apoplectic character, and brain injury results, as hemiplegia, etc., should pregnancy again occur, fatal eclampsia may be confidently expected.

On the other hand, when eclampsia in primiparæ is due to primiposity—irritability of the nervous system, pressure on the kidneys or ureters caused by the tonicity of the abdominal wall—and when neither the brain or kidneys are left crippled by the attack, the probability of a recurrence of convulsions in subsequent pregnancies is not great.—ED. REPORTER.]

### A Pin Eight Years in the Body.

TO THE EDITOR.

Sir: Eight years ago, Ella W., a Swedish girl, fourteen years old, while dressing, placed a pin in her mouth and accidentally swallowed it. It lodged in the throat, and caused considerable pain and uneasiness for a short space of time—probably an hour—when all pain suddenly ceased, and no more trouble was experienced. About four months ago, while engaged in some culinary work and in rolling up the sleeve of her dress, she noticed a small elevated spot over the internal condyle of the right humerus. Upon examination, the object was soon recognized as the pin swallowed some eight years before.

Being called in to examine the case, I found that the pin was just beneath the skin, and that the pin's head was nearest the surface; and upon making a small incision through the integument, I extracted the pin, which was in a good state of preservation.

At no time during the period of its passage from the throat to its location when extracted has it caused any inconvenience. In fact, it was entirely forgotten.

Having frequently heard of such cases as this, I have never had occasion to meet one until the present occasion.

Yours truly,

H. L. BRUSH, M. D.

Pleasant Grove, Utah.

### NOTES AND COMMENTS.

#### Tampon in Menorrhagia.

Dr. W. H. Mays, of San Francisco, has an interesting article in the *Pacific Medical Journal*, March, 1891, in which he advocates tamponing for obstinate menorrhagia.

He refers to the medicinal agents usually employed, the styptics and tonics, the hot

douche and the curette, and says that when all these shall fail, as they frequently will, to check the propensity to bleeding, when the physician finds it borne in upon him that the more he treats the case the worse is the trouble becoming, there is a remedy at his command which, fearlessly used, will give him absolute control over the hemorrhage, namely, the tampon.

At the threshold we are likely to be confronted with an old prejudice. Would you dare to arrest the menstrual flow? In one instance where it was proposed to tampon at the end of the first twenty-four hours of menstruation, he was told that the blood would surely "go to the head" and work dire results. The function has been hedged about with a peculiar sanctity, and the dangers of interfering with it greatly exaggerated. Dr. Goodell in a recent paper says: "I have learned to unlearn the teaching that woman must not be subjected to a surgical operation during her flux. Our forefathers taught that the presence of a menstruating woman would pollute solemn religious rites, would turn milk sour, spoil the fermentation of wine, and do much other mischief in a general way. Influenced by hoary tradition, physicians generally postpone all operative treatment until the flow has ceased. But why this delay, if time enters as a factor in the case? I have found menstruation to be the very best time to curette away fungous vegetations of the endometrium, for being swollen they are then larger and more readily removed than at any other time." While we may not agree with this writer as to the advantage of curetting during the flow, the quotation shows the drift of gynecological opinion concerning the supposed danger of interfering with a menstruating woman. So little importance does Professor Loewenthal, of Lausanne, attach to the old superstition, that he advocates the complete and repeated suppression by artificial means of the menstrual flow in chlorosis, and publishes a record of twenty-three cases so treated, all of them with benefit.

In illustration of the use of the tampon in menorrhagia, Dr. Mays related the following case, from his practice.

A. B., aged twenty-seven, had been the subject of menorrhagia for three years before coming to him. The disorder was gradually acquired, its origin being ascribable to no cause that could be gleaned from the patient's history. No particular excess of pain accompanied the molimen, but she simply

bled freely, passing clots after the first day and soaking napkin after napkin throughout a period of four or five days. Most of the period was of necessity passed in bed, owing to prostration. During the inter-menstrual intervals she would drag herself around, weak, pale and nervous, but the exhausting hemorrhages, repeated with unrelenting regularity, were sapping her strength and making her existence a miserable one. She had been under treatment the greater part of this time, and about four months before coming to him had been carefully curetted.

On examination he found nothing abnormal in the position or shape of the pelvic organs. The sound revealed some little elongation of the uterine canal. There was no endometritis.

He explained to her that the mucous membrane being set bleeding, the tendency was to keep on bleeding, and, as in the case of a cut finger, the indication simply was to stanch the hemorrhage by pressure. This he proposed to do each month by the aid of the tampon, after she had lost as much as in his judgment she could afford to lose. She readily consented. So at the next menstrual epoch, after allowing the flow to continue for thirty hours, he proceeded to tampon the vagina. Drawing back the perineum with a Sims speculum, pieces of cotton wrung out of an alum solution were packed firmly and tightly, first behind and then in front of the cervix, then at the sides, gradually building a solid mass occupying the whole caliber of the vagina, until the vulva was reached. A compress and T bandage completed the procedure. Four hours later the outermost wad of cotton, which pressed on the urethra, had to be removed to allow of urination. On removing the tampon after forty-eight hours, no evidence of further hemorrhage was observable, and the patient rose stronger than had been customary.

At the next menstrual period, the tamponing was repeated. For some reason the packing was not done so solidly as before, and some blood soaked the tampon and escaped from the vulva, though not much. A month later the tampon, applied on the second day, proved a perfect means of control. So also at the next and at several periods immediately following. The patient has only been "packed" twice during the past six months, as the flow rarely now, with proper care on her part, transcends the natural limit. She was gaining in color and

weight, and enjoyed better health than for years previously.

This case is typical enough; it is not necessary, Dr. Mays says, to cite others in support of his argument. The tampon is essentially the thing in what may be called uncomplicated cases of menorrhagia. When subinvolution is acting as the cause, it is often the best remedy to employ. Even where the grosser forms of uterine disease are present it may be recommended, for it should be remembered that menorrhagia alone, by its exhaustive waste, its depraving of tissue, and the nervous and circulatory disturbances it sets up, will, itself, produce uterine inflammations, vegetations, flexions, etc.

Bearing on this subject, Dr. Mays quotes from Dr. Gehrung, whose able article is found in the *Journal of Obstetrics*, November, 1888.

"Every practitioner will recall a number of these pitiful cases of broken-down constitution, nervous to the verge of insanity, complaining of the ills that flesh is heir to, who under treatment improve for a while until the next return of the menses mercilessly destroys all that has been gained. The poor woman passes from the hands of the neurologist to the gynecologist, and then back again, until exhausted in confidence, blood and means. Each in his turn has honestly done his best, each is conscious that each recurring menstruation destroys the fruits of his labor."

"The tampon is the remedy which stands at the disposition of every practitioner, whereby he may regulate the amount of loss in menstruation according to the necessity of the case."

Dr. Bizzell, of Georgia, advocates repression of the menstrual flow in menorrhagia, while other agents prove unavailing or are contra-indicated. Quoting Dr. Taliaferro he says: "By this method we have a marvelous therapeutic resource." Cases that have obstinately resisted other methods yielded promptly to this. He prefers, however, the intra-uterine tampon, which consists of a roll of cotton about the length and thickness of a lead pencil. This is iodoformed and carried up through the os to the fundus with a slender dressing forceps, packing it in tightly. The vagina is also tamponed. It is left *in situ* seven or eight days.

Dr. Mays's experience is against the intra-uterine tampon. On the only occasion on which he tried it, colicky pains of a very violent character ensued, necessitating a speedy

removal of the offending cause. Dr. Gehrung states that in a case in which he resorted to the intra-uterine tampon it made matters worse, the uterus relaxing so completely that blood found its way freely around the plug.

Vaginal tamponing skilfully done will prove entirely satisfactory. Dr. Mays adds that in applying the strips of dampened cotton, it is well to work with two pairs of dressing forceps, one pair to press the tampon in an opposite direction from where the next piece of cotton is to be placed with the other pair.

### Treatment of Recent Hernia by Aspiration.

In the *British Medical Journal*, February 7, 1891, Dr. John Hern says: On being called some years since to a case of recently strangulated hernia which I failed, under chloroform, to reduce by taxis, finding the tension in and distention of the protruded gut apparently the main obstacle to reduction, I emptied it by means of my hypodermic syringe, with the result that reduction was at once easily accomplished. I have since repeated the operation on thirty-two occasions, in twenty-eight of which reduction was readily accomplished, and in the remaining four, three were, subsequent to aspiration, subjected to the usual operation (with one death from gangrenous gut), and one steadfastly preferred death to further operation, and succumbed on the tenth day. In neither of the three cases of herniotomy could any traces be found of the previous aspiration, due I think, to two causes, the small size of the needle used and the arrangement of the muscular fibers in the wall of the gut.

The class of cases which have appeared to me most suitable for the operation are recent cases—36 to 48 hours or less; where the patient or friends refuse to submit to herniotomy. The simple aspiration can be designated "doing a little something." The advantages claimed for this procedure are:

1. It avoids the delay almost inseparable from the herniotomy, for example, gaining consent of friends, procuring adequate assistance, etc.

2. It avoids rough and heroic attempts at reduction by taxis by placing in the hands of the general practitioner a means of reduction easy of application, and requiring no extensive surgical skill for its per-

formance, and, moreover, a proceeding, which, by reducing the tension of the protrusion, lessens the danger of the taxis subsequently employed.

3. It avoids the risks of pyemia and septicemia, inseparable from all operations in which skin is divided.

Let us consider in how far this operation is based on a consideration of the anatomical and pathological conditions present. We must remember that the internal abdominal ring, the inguinal canal, the external abdominal ring, the crural ring, the crural canal and the saphenous opening in the fascia lata of the thigh are all bounded chiefly, if not solely, by aponeurotic structures, which have become thickened and resistant although the openings have all become dilated. The margins of these openings forced back and thickened offer a strong passive resistance, so that if the protrusion becomes distended in any way by feces or flatus, the neck or narrow portion is so wedged into these fascial openings or canals that it becomes compressed, the venous circulation impeded (both arteries and veins are, of course, compressed, but the thicker coats of, and the greater force of circulation in, the former render them less affected by the pressure), the proportion between the protrusion and the opening or canal through which it has descended becomes so altered, that the hernia becomes irreducible. Now, seeing that (in recent cases, at any rate) it must be the distention of the protrusion which is the main obstacle to reduction, there having elapsed no time for the effusion of lymph or other inflammatory changes to occur, having failed to reduce by taxis, it appears to me to be a perfectly justifiable proceeding to at once empty the protrusion of whatever fluid or flatus it may contain, and having thus lessened its bulk, to reduce by taxis.

### Impure Milk in Large Cities.

The *New Orleans Medical and Surgical Journal*, February, 1891, says editorially: Persons residing in the country, or in small towns away from the great centres of trade and competition, have no idea of the many frauds perpetuated by the vendors of the commonest articles of food consumed in large cities. Not least among these is the adulteration of milk with dirty water, or some other substance designed to give it a creamy appearance and cause it to pass



muster before the dreaded lactometer of the officers of the Board of Health.

It has now become the practice in all cities to keep dairymen under surveillance, so that at least the proportion of adulterants added shall be comparatively small. New York and Chicago and other cities have regular milk inspectors, whose sole duty is to procure and analyze samples of this article offered for sale, and to prosecute criminally all persons who sell other than the natural secretion of the cow. Our own Board of Health has for the past five years made regular examinations of milk, and, by following up the offenders to the recorder's court, has succeeded in materially improving the standard of milk sold in the city of New Orleans. Some points of general interest were brought forward in a recent report of the chief sanitary inspector, and we will venture to quote a portion of it, as the conclusions to be drawn therefrom are obvious. We can see from this what an easy thing it is for the public to be imposed upon and cheated by their milkmen, to whom they are paying the highest prices for the poorest quality of milk.

This is bad enough, but when we consider who are the persons consuming this fluid and what is the character of the adulterant consumed, the question comes home to us more directly as medical men. We have simply to refer to our mortuary records for May and June of any year and study over the large mortality among children from the bowel diseases, and then, when we think of the sour, stale, watered or adulterated milk that many children are fed upon, we may, perhaps, be willing to discard the antiquated idea of "teething" being a cause of most of these complaints, and attribute a larger proportion of the deaths to improper nourishment.

The substances usually used for adulterating milk are starch, sodium, chloride, borax, chalk, glycerine and bicarbonate of soda. When milk has been skimmed and watered its creamy appearance may be restored by the addition of condensed milk from cans, a common practice in New Orleans.

But what seems to us to be most injurious of all the substances added to milk by the New Orleans dairyman is simple water. This water is from cisterns or wells situated in the swamps back of town and is often teeming with the germs of malaria. Besides, there is the danger to milk from cows

drinking ditch water, from which a number of apthous diseases are known to have arisen. Much more might be said upon the danger of impure milk to young children, particularly in reference to tyrotoxicon, a poison generated in stale and sour milk, but we shall have more to say on this subject at another time.

In conclusion, we heartily endorse the following assertions of Mr. J. Lewis Smith:

"In order to obtain milk of the best quality, it is necessary to procure it from a dairy remote from the city, where there is good pasturage, an abundant supply of water, and the health of the cows is promoted by out-door life in open meadows. Stabled cows, in or near the city, fed with distillery food, hay, and in part by kitchen refuse, do not furnish good milk. Such cows are likely to have dirty udders, and their milk, chemically inferior to that of pastured cows, becomes in the open pails the receptacle of bacteria, which are abundant in stables of ordinary cleanliness. Milk, therefore, that is suitable for the nursery in the summer months is obtained at a distance from the city, where cows have the range of the fields, and lie at night in the open air upon the grass."

#### The Vital Statistics of New York State in 1890.

The *New York Medical Journal*, February 7, 1891, says: The annual mortality-sheet of the New York State Board of Health has appeared for the year 1890, giving the total deaths by eight sanitary districts, by months, and by the usual principal causes. The deaths for the whole State, with a small correction for the non-reported mortality in some rural sections, were 127,630, in a population estimated at 6,000,000; this is equivalent to a death-rate of 19.6 to the 1,000. The mortality from zymotic diseases was less than in recent years, a decline being registered in scarlet fever, diphtheria, typhoid fever, and diarrhoeal disorders. Measles showed a marked elevation. Small-pox caused four deaths. Epidemic influenza is estimated to have caused not fewer than 5,000 deaths in the early months of the year, but it did not operate to raise the zymotic mortality, for the reason that a large proportion of its deaths was certified under the head of respiratory and other local catarrhs. There were 18,000 deaths from respiratory diseases, a number greatly in excess of

former years; this is non-inclusive of consumption, which was charged with 13,800 deaths. From unclassified causes there were 18,728 deaths.

### Diagnosis of Previous Pregnancy.

From a medico-legal point of view it is sometimes of the greatest importance to determine whether a woman has ever borne a child or not. According to Dittrich, as quoted in the *Deutsche medizinische Wochenschrift*, January 29, 1891, from the *Prager medizinische Wochenschrift*, microscopical examination reveals hyaline degeneration and necrosis of the muscular tissue of the uterus and, in rare instances, of the muscular fibers of the tunica media of the arteries as well, in cases in which a woman has been pregnant even though the gestation has been prematurely terminated.

### Medical Attendance for the Poor in Richmond.

The *Virginia Medical Monthly*, February, 1891, says that Richmond, with its nearly 100,000 population, has no city hospital, except the hospital wards in its almshouse. No other city, in Europe or North America, of anything like its population, so far as we know, is without its distinctive city hospital for the cure of its sick or wounded working classes. The City Council has just voted \$2,000 annually, to be divided among four physicians, to be elected, located in different parts of the city, whose duty it shall be, to attend the deserving poor of their respective four districts of the city, without charge.

### The Medical Law of Alabama.

The *Alabama Medical and Surgical Age*, February, 1891, says that the "Penalty Bill," which recently passed the Legislature, gives Alabama a model medical law, and places the State Medical Association on a safe and sound basis. The penalty bill, as it passed the Legislature, provides that any person practicing medicine or surgery in this State, without having first obtained a certificate of qualification from one of the authorized Boards of Medical Examiners of this State, shall be guilty of a misdemeanor,

and on conviction thereof shall be fined not less than twenty-five dollars nor more than one hundred dollars. Provided, that this act shall not apply to any doctor practicing medicine in Alabama who is a graduate of a reputable medical college, and who has complied with the law by having his diploma recorded by the Judge of Probate in the county in which he is practicing.

The *Ages* says: "Much credit is due to the committee appointed by the Montgomery County Medical Society, consisting of Drs. Baldwin, Gaston, Blue, Wilkerson, Hill, Sealy and Andrews, for the work they did during the session of the Legislature. The irregulars had one or two men on the floor, and used the newspapers for all they were worth, and occasionally resorted to circulars, but this committee, faithful to themselves, their society, the medical profession and the people of Alabama, was able at every point to combat the inroads of the demagogue, upset the schemes and plans of the irregulars and prevent the evils which would have resulted from such vicious legislation as they desired. We cordially welcome all worthy physicians to Alabama, and in doing so, we assure them of fair, just and honest treatment, regardless of name, school or previous condition, but the Legislature of Alabama has said that the Medical Examining Board must protect the people from the imposition of quacks, demagogues and incompetent men, and by the authority invested and for the sake of suffering humanity, and for the protection of the people, we promise that our Boards of Examiners will be equal to the task."

### Association of American Physicians of Berlin.

About forty American and Canadian physicians held a meeting on February 19, 1891, at Berlin, in order to found a permanent organization such as exists in Paris, London, Edinburgh and Vienna. Prof. Miller, of the University of Pennsylvania, now Professor at the University of Berlin, called special attention to the fact that such an organization would not only greatly benefit the physicians who remain here for purposes of study, but also that it would call the attention of Germany to the forward tendency of American medical science. He strongly urged the publication of the transactions of the Association every year. Permanent organization was effected, Dr. Judson Daland, of Philadelphia,

being elected President, and Dr. F. Weber, of Milwaukee, Secretary,

Prof. Miller, Dr. Amos, of Iowa, Dr. H. Douglas, of New York, and the President and Secretary were elected as a Committee on Constitution.

Dr. H. T. Brooks, of New York City, Dr. Louis Frank, of Louisville, Dr. Crystal, of Baltimore, Dr. Neal Mitchell, of Florida, Dr. Marple, of New York, and Dr. Kennedy, of Montreal, were appointed a Committee on information to new-comers, and organization of special private courses.

The objects and scope of the society are:

*First*, The arrangement of medical work and the formation of special private courses so that any desired instruction may henceforth be obtainable at this University.

*Second*, The giving of advice to new-comers regarding instruction, lodgings, books, instruments, etc.

*Third*, The reading and discussion of papers of general interest and the exhibition of patients and demonstration of specimens in all lines of work taken up by members.

*Fourth*, The furthering of mutual ends by a more extended acquaintance of the physicians here.

The society at its first session listened to an interesting demonstration of specimens of myocarditis segmentaire and of a blood cyst of the aortic valve, by Dr. Henry Douglas, of New York City. Dr. Weber then demonstrated specimens of blood of leukemia and pernicious anemia, and talked of the value of Ehrlich's method of blood-staining. Dr. Daland talked about malaria and relapsing fever in Russia, and demonstrated the pathological micro-organisms of these diseases. An interesting discussion of these papers followed.

Drs. Fitzgibbon and Mead, of Wisconsin, and Navy Surgeon Kenyon, were present as visitors. Prof. Miller then offered the use of the Dental Lecturing Room of the University, Dorotheenstrasse 40, as a permanent meeting room for the society.

New-comers and others desiring information will please apply to or address the Secretary, Dr. Fredk. R. Weber, Charité, Berlin.

#### Golden Belt Medical Society.

The regular quarterly meeting of the "Golden Belt District Medical Society" for the annual election of officers, and mutual entertainment of the profession, will

be held in the club-rooms of the National Hotel, Topeka, Kansas, April 9, 1891.

The large attendance in the past bespeaks a thriving condition of the Society, and a large attendance is desired at this, our most important meeting of the year.

The programme provides, for the afternoon session: A Report of a Case of Nymphomania with Treatment, by L. R. King, M. D., Junction City; A Report of Some Cases of Cystitis with Treatment, by J. H. Garey, M. D., Wilsey; Report of a Case (not described) by C. H. Guibor, M. D., Topeka.

For the evening session: A paper on Some Recent Improvements in Intestinal Surgery, with Demonstration upon the Dog, by Emory Lanphear, M. D., Kansas City, Mo.; one on Phimosis, Local and Remote Results, by A. H. Cordier, M. D., McPherson; one on Peri-Uterine Inflammation, by Chas. W. Adams, M. D., Kansas City, Mo., and the Annual Address by the President, P. Daugherty, M. D., Junction City.

The officers of the Society are: President, P. Daugherty, M. D., Junction City; First Vice-President, W. N. King, M. D., Abilene; Second Vice-President, Z. T. Harvey, M. D., Council Grove; Secretary, F. B. Browne, M. D., Salina; Treasurer, T. N. Gunn, M. D., Chapman.

#### State Board of Medical Examiners.

The Regents of the University of New York have appointed State Boards of Medical Examiners as follows:

From the Medical Society of the State of New York: for three years from September 1, 1891, W. W. Potter, of Buffalo, William S. Ely, of Rochester, and Maurice J. Levi, of Albany; for two years from September 1, 1891, William C. Way, of Elmira, and George R. Fowler, of Brooklyn; for one year from September 1, 1891, J. P. Creveling, of Auburn, and Eugene Beach, of Gloversville.

From the Homoeopathic Medical Society of the State of New York: for three years from September 1, 1891, William S. Searle, of Brooklyn, Horace M. Paine, of Albany, and Asa S. Gosh, of Fredonia; for two years from September 1, 1891, John McE. Wetmore, of New York, and Jay W. Sheldon, of Syracuse; for one year from September 1, 1891, E. E. Snyder, of Binghamton, and A. R. Wright, of Buffalo.